Claims:

1-5 (canceled)

6.(new) A multi-channel redundant wireless link (RWNL)device comprising:

a processor unit;

a system function means;

a plurality of wireless networking units;

a plurality of wired networking units;

at least one system bus;

whereby the said units are interconnected with each other via the said system bus, and

whereby all the units are inside on enclosure with necessary connectors for connecting to the outside of the said enclosure, and

wherein the system function means is the digital possessing function running primary in the processor unit and among all the other units, and

Wherein said wireless networking unit can communicate with remote wireless networking device forming a wireless networking sub-link via antenna means, and

Wherein said system function means is running to control networking communication packets to be redistributed among all the wireless networking units for aggregating the networking bandwidth and providing redundancy among the wireless units, and

Wherein the said system function means communicating between the said wireless and wired networking units in the same said RWNL device, and

Wherein the said system function mean is running to control networking packets to be redistributed among all the remaining communicating

wireless networking sub-links and keep communication between the
RWNL device and remote RWNL device when there is/ wireless
networking sub-link that failed of communicating with remote networking
device.

5   7.(new) the said RWNL device of claim 6 may include a control unit for
extend the system control to wireless networking units

    whereby said control unit connection to system bus

    whereby said control unit connecting to said wireless networking
       units

10   whereby said processor unit can extend the controlling capability via
       the control unit

8(new), A point-to-point multi-channel full redundant wireless networking link
comprising:

15   two multi-channel redundant wireless networking link (RWNL) devices of
    claim 6, and

whereby one said RWNL device is connecting to one wired network via its
    wired networking unit, and

Whereby the second RWNL device is connecting to another wired network
20   via its wired networking unit, and

Whereby said two RWNL devices communicating to each other wirelessly,
    and

wherein one of the wireless networking units of the one said RWNL device
    communicating with remote corresponding wireless networking unit of
25   the another said RWNL device form a wireless sub-link, and

wherein the said system function means in the RWNL device aggregating
    the networking bandwidth of the all the sub-links forming a virtual
    bigger networking link between two said RWNL devices, and

wherein the said system function means of said two RWNL devices

coordinating each other when one of the wireless sub-links is having

problem and to disable the said problem wireless sub-link, and

wherein further the said system function means continuing to

5 redistribute the networking traffic among the remaining sub-links

forming a new virtual communication link, and

Whereby two said wired networks connecting to each other via said virtual

communication link redundantly.

10 9(new). A point-to-multi-point multi-channel full redundant wireless networking

link comprising:

One multi-channel redundant wireless networking link (RWNL) devices of

claim 6 as master node.

A plurality of multi-channel redundant wireless networking link (RWNL)

15 devices of claim 6 as client nodes

whereby said master RWNL device connecting to master wired network

via its wired networking unit, and

Whereby client RWNL devices connecting to corresponding client wired

networks via their own wired networking unit, and

20 Whereby the said a plurality of RWNL client devices are

communicating with the said RWNL master device wirelessly, and

wherein one of the wireless networking units of said master RWNL device

communicating with corresponding wireless networking unit of said

client RWNL device forming a wireless sub-link, and

25 wherein further the wireless networking unit of said master RWNL

communicating with corresponding wireless networking units of

multiple said client RWNL devices forming a wireless point-to-multiple-

point sub-link, and

wherein the said system function means in the RWNL device aggregating the networking bandwidth of the all the wireless sub-links forming a virtual bigger point-to-multiple-point networking link, and

wherein the said system function means coordinating each other between the master RWNL device and client RWNL devices when one of the sub-links is having problem and to disable that said problem sub-link, and

wherein further the control means continuing to redistribute the networking traffic among the remaining sub-links forming a new virtual point-to-multiple-point communication link, and

Whereby said master wired networks connecting to client wired networks via said virtual communication link redundantly.

10(new). A point-to-multi-point multi-channel partial redundant wireless networking link comprising:

.one multi-channel redundant wireless networking link (RWNL) devices of claim 6 as master node.

A plurality of multi-channel redundant wireless networking link (RWNL) devices of claim 6 as client nodes

whereby said master RWNL device connecting to master wired network via its wired networking unit, and

Whereby client RWNL devices connecting to corresponding client wired networks via their own wired networking unit, and

Whereby the said a plurality of RWNL client devices are communicating with the said RWNL master device wirelessly, and

wherein further one group of wireless networking units of said master RWNL communicating with corresponding wireless networking units of multiple said client RWNL devices forming a wireless point-to-multiple-point sub-link group, and

wherein further the other group of wireless networking units of said master RWNL communicating with corresponding wireless networking units of multiple said client RWNL devices forming the other wireless point-to-multiple-point sub-link group, and

5 wherein the said system function means in the RWNL device aggregating the networking bandwidth of the all the wireless sub-links in the same said point-to-multiple-point sub-link group forming a virtual bigger point-to-multiple-point networking link, and

wherein the said system function means coordinating each other between

10 the master RWNL device and client RWNL devices of the same wireless point-to-multiple-point sub-link group when one of the sub-links is having problem and to disable that said problem sub-link, and wherein further the control means continuing to redistribute the networking traffic among the remaining sub-links of the same group

15 forming a new virtual point-to-multiple-point communication link, and Whereby said master wired network connecting to client wired networks via said virtual communication link redundantly.

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Abstract:

Page 10, line 10, change "plurality" to –a plurality-

Page 10, line 20, change "Thus, as far as there is" to –Thus, as long as there is –

25 Page 10, line 23, change "is" to –has-